

# United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO.   | FILING DATE    | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |  |
|---|----------------|----------------------|---------------------|------------------|--|
| 09/933,279  | 08/20/2001     | Lie-zhong Gong       | 1941. PKG           | 4642             |  |
| 7:  | 590 06/18/2003 | •                    |                     |                  |  |
| Cynthia L. Foulke                                       |                |                      | EXAMINER            |                  |  |
| National Starch and Chemical Company 10 Finderne Avenue |                |                      | GOFF II, JOHN L     |                  |  |
| Brigdewater, NJ 08807                                   |                |                      | ART UNIT            | PAPER NUMBER     |  |
|   |                |                      | 1733                |                  |  |

Please find below and/or attached an Office communication concerning this application or proceeding.

DATE MAILED: 06/18/2003

PTO-90C (Rev. 07-01)

|   |  |                           |                    | \  | M         |  |  |  |
|---|--|---------------------------|--------------------|--|-----------|--|--|--|
| Office Action Summary   |  | Applicati                 | on No.             | Applicant(s)   | V         |  |  |  |
|   |  | 09/933,2                  | 79                 | GONG ET AL.  |           |  |  |  |
|   |  | Examine                   | r                  | Art Unit   |           |  |  |  |
|   |  | John L. G                 |                    | 1733   |           |  |  |  |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply  |  |                           |                    |  |           |  |  |  |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).  - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).  Status |  |                           |                    |  |           |  |  |  |
| 1)⊠ Respons   | sive to communication(s) file  | d on <u>20 August 200</u> | <u>)1</u> .        |  |           |  |  |  |
| 2a)☐ This acti  | on is <b>FINAL</b> . 2   | b)⊠ This action is        | non-final.         |  |           |  |  |  |
| 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims   |  |                           |                    |  |           |  |  |  |
| 4)⊠ Claim(s)  | 1-19 is/are pending in the a   | pplication.               |                    |  |           |  |  |  |
| 4a) Of the  | 4a) Of the above claim(s) <u>1-10 and 15-19</u> is/are withdrawn from consideration.         |                           |                    |  |           |  |  |  |
| 5) Claim(s)   |  |                           |                    |  |           |  |  |  |
|   | 6)⊠ Claim(s) <u>11-14</u> is/are rejected.   |                           |                    |  |           |  |  |  |
| 7)  |  |                           |                    |  |           |  |  |  |
|   | are subject to restricti   | on and/or election r      | equirement.        |  |           |  |  |  |
| Application Papers  |  |                           |                    |  |           |  |  |  |
| 9) The specification is objected to by the Examiner.  |  |                           |                    |  |           |  |  |  |
| 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  |  |                           |                    |  |           |  |  |  |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).   |  |                           |                    |  |           |  |  |  |
| 11) ☐ The proposed drawing correction filed on is: a) ☐ approved b) ☐ disapproved by the Examiner.  |  |                           |                    |  |           |  |  |  |
| If approved, corrected drawings are required in reply to this Office action.  |  |                           |                    |  |           |  |  |  |
| 12) The oath or declaration is objected to by the Examiner.   |  |                           |                    |  |           |  |  |  |
| Priority under 35 U.S.C. §§ 119 and 120   |  |                           |                    |  |           |  |  |  |
| 13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  |  |                           |                    |  |           |  |  |  |
| a) ☐ All b) [   | a) All b) Some * c) None of:   |                           |                    |  |           |  |  |  |
| 1.□ Ce  | 1. Certified copies of the priority documents have been received.                            |                           |                    |  |           |  |  |  |
| 2.□ Ce  | 2. Certified copies of the priority documents have been received in Application No           |                           |                    |  |           |  |  |  |
| <ul> <li>Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>  |  |                           |                    |  |           |  |  |  |
| 14) Acknowled   | gment is made of a claim for   | r domestic priority u     | nder 35 U.S.C. § 1 | 119(e) (to a provisional appli                                   | ication). |  |  |  |
| a) The translation of the foreign language provisional application has been received.  15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.   |  |                           |                    |  |           |  |  |  |
| Attachment(s)   |  |                           |                    |  |           |  |  |  |
|   | ces Cited (PTO-892)<br>erson's Patent Drawing Review (PT<br>osure Statement(s) (PTO-1449) Pa |                           | ·                  | nmary (PTO-413) Paper No(s)<br>rmal Patent Application (PTO-152) |           |  |  |  |
| U.S. Patent and Trademark Office<br>PTO-326 (Rev. 04-01)  |  | Office Action Summa       | ary                | Part of Paper No. 7  | _         |  |  |  |

Art Unit: 1733

### **DETAILED ACTION**

### Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 12-16 have been renumbered 15-19, respectively.

2. Claims 11-14 are objected to because of the following informalities: Elected claims 11 and 12 should be rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Appropriate correction is required.

### Election/Restrictions

- 3. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-10 and 15, drawn to adhesives, classified in class 252, subclass (unknown).
  - II. Claims 10-14, drawn to bonding methods, classified in class 156, subclass 308.2.
  - III. Claims 16 and 17, drawn to containers, classified in class 428, subclass 35.7.
  - IV. Claims 18 and 19, drawn to diapers/garments, classified in class 2, subclass (unknown).

Art Unit: 1733

4. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process such as (1) one wherein a substrate is coated with the adhesive, (2) one wherein a substrate is bonded to itself with the adhesive, and (3) one wherein the adhesive is injected between two assembled substrates.

Inventions I and III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as an adhesive for laminating articles other than containers and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions I and IV are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate

Art Unit: 1733

product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as an adhesive for laminating articles other than diapers/garments and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make a materially different product such as products other than containers.

Inventions II and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make a materially different product such as products other than diapers/garments.

Art Unit: 1733

Inventions III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are entirely different products.

- 5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
- 6. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
- 7. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group III, restriction for examination purposes as indicated is proper.
- 8. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group IV, restriction for examination purposes as indicated is proper.
- 9. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group III, restriction for examination purposes as indicated is proper.
- 10. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group IV, restriction for examination purposes as indicated is proper.

Art Unit: 1733

11. Because these inventions are distinct for the reasons given above and the search required for Group III is not required for Group IV, restriction for examination purposes as indicated is proper.

- 12. During a telephone conversation with Cynthia Foulke on 6/13/03 a provisional election was made without traverse to prosecute the invention of Group II, claims 11-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-10 and 15-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
- Applicant is reminded that upon the cancellation of claims to a non-elected invention, the 13. inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Art Unit: 1733

# Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Hellmann et al. (U.S. Patent 4,906,497).

Hellmann et al. are directed to a reactivatable hot melt adhesive. Hellmann et al. teach an adhesive composition comprising a hot melt adhesive and a pigment such as carbon black dispersed therein. Hellmann et al. teach a method of bonding comprising applying the reactivatable hot melt adhesive to a first substrate, irradiating (e.g. through microwave radiation) the adhesive to melt the adhesive, and applying with pressure the first substrate to a second substrate wherein the adhesive is allowed to cool thereby bonding the first substrate to the second substrate (Column 1, lines 5-11 and Column 3, lines 1-16 and 52-56 and Column 6, lines 15-25 and Column 9, lines 27-37).

## Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 1733

17. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

18. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (Specification pages 1 and 2) in view of Hellmann et al.

The admitted prior art is directed to conventional packaging processes used in the manufacture of containers such as boxes and bags. The admitted prior art teaches using a hot melt adhesive to seal the containers (Specification page 1, paragraph 3). The admitted prior art further teaches the adhesives may be pre-applied and then reactivated prior to sealing (Specification page 1, paragraph 4 and page 2, paragraph 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the hot melt adhesives taught by the admitted prior art to include pigments such as carbon black as suggested by Hellmann et al. to increase the speed at which the adhesives are reactivated. It is noted the admitted prior art as modified by Hellmann et al. would also provide a method of reactivating the adhesives wherein only the adhesive is heated not the substrate, its contents, or the surrounding area and equipment.

Hellmann et al. are directed to a reactivatable hot melt adhesive. Hellmann et al. teach an adhesive composition comprising a hot melt adhesive and a pigment such as carbon black

Application/Control Number: 09/933,279

Art Unit: 1733

dispersed therein. Hellmann et al. teach a method of bonding comprising applying the reactivatable hot melt adhesive to a first substrate, irradiating (e.g. through microwave radiation) the adhesive to melt the adhesive, and applying the substrate to a second substrate wherein the adhesive is allowed to cool thereby bonding the first substrate to the second substrate (Column 1, lines 5-11 and Column 3, lines 1-16 and 52-56 and Column 6, lines 15-25 and Column 9, lines 27-37). Hellmann et al. teach reactivating the hot melt adhesive using the carbon black pigment decreases the time and energy required for reactivation (Column 3, lines 10-16). It is noted Hellmann et al. teach embodiments for using the adhesive to bond floor and wall coverings. However, these embodiments are merely exemplary as Hellmann et al. teach the adhesive can be used to adhere sheet like structures which would not have excluded packaging.

Regarding claims 13 and 14, the admitted prior art as modified by Hellmann et al. are silent as the duration of irradiation and pressure applying. However, these conditions are directly related to the amount of irradiation applied, and determining, i.e. optimizing, the bonding conditions would be readily expected of one of ordinary skill in the art as doing so would require nothing more than ordinary skill and routine experimentation.

#### Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the

Application/Control Number: 09/933,279

Art Unit: 1733

organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

John L. Goff

Jd sh

June 13, 2003

STEVEN D. MAKI 6-13-0

Page 10

RIMARY EXAMINER
-GROUP 1300-

AU 1733